

“Gas, Power & Renewables: What has been Achieved & where we are Heading”

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BY

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outline

- The exhaustive nature of gas as a fossil
- The imperativeness of adding renewables to the Nigerian energy mix
- NERC & the development of an actionable renewable energy framework for Nigeria
- Exploring the various renewable energy opportunities available to Nigeria & their pros / cons.
- The role of NERC in moving Nigeria towards energy efficiency.
- Challenges for NERC in regulating for energy efficiency in Nigeria & opportunities for RE financiers.



Electricity on Demand

We must curb this unsustainable trend

- Today, the source of power generation in Nigeria remains overwhelmingly gas (fossil)
- This is mainly for two reasons,
 - ✓ it is a reflection of the a general trend/ pattern across the world
 - ✓ It is a reflection of the strong economic advantage Nigeria has in Natural Gas exploitation.
- Given this predicament, the odd is stacked against RE sources in Nigeria, as we the regulator on average receive more gas turbine interests from investors, as compared to RE

WHY RENEWABLE ENERGY IS IMPERATIVE TO THE NIGERIAN ENERGY MIX

- The Exhaustive nature of fossil energy (gas) makes it essential to diversify our national energy base.
- Fossil energy is unfriendly to the environment & is the key precipitator of global Climate Change.
- Most Renewables are eco- friendly, easier to harness.
- The exploitation of a potential renewable could be infinite.
- Renewables are the future for powering remote, hard to access & isolated rural areas of Nigeria.
- The Nigerian landscape is replete with abundance of varieties of renewables which could potentially reduce dependence on fossil.



NERC IS REGULATING FOR AN ENERGY EFFICIENT FUTURE FOR NIGERIA

- Under my stewardship, NERC is pursuing alongside the reform of the NESI, the transition to a more sustainable energy future by regulating for a greatly improved energy efficiency, & the inclusion of renewable energy resources into Nigerian energy mix.
- NERC within my administration, would also evolve towards the inclusion of environmental costs in the market prices of energy as is the custom the world over.
- NERC has recorded a significant progress in switching Nigeria from the low-efficiency incandescent lighting to higher-efficiency fluorescent and LED lighting.



Electricity on Demand

NERC & the development of an actionable renewable energy framework for Nigeria

- My regime at NERC while having the immediate task of regulating for sufficient energy, is equally futuristic in outlook, thus it is my aim to encourage through regulatory mechanisms, the permeation of significant renewable sources into the national energy mix.
- I have already instituted the NERC fellowship to engage experienced & emerging researchers on the subject.
- NERC is also collaborating with Nigerian higher learning institutions to harness the different breakthrough researches in the field with a view to bringing them to fruition.
- Generally, NERC is working towards a low carbon economy for Nigeria



Regulation Framework

- The Commission has licensed two Renewable power projects above 1MW
 - 5MW Solar project located in Jos, Plateau State (Wedotebary Nig Ltd)
 - 39MW Hydro power Project in Dadinkowa, Gombe State (Mabon Ltd)
- Developed FIT for Solar, Wind and Small Hydro
 - Developed by the RRD Division of NERC
 - The FIT was part of the working document by a consultant developing Tariff Methodology for NERC
 - Consultation with the stakeholders on major review of the tariff Methodology (inclusive of the FIT) proposed for the end of the March, 2011
 - The reviewed tariff methodology to come into effect in July 2011

Regulation framework cont'd

- Developed Standards (Draft) for Solar Home System
- Developed Standards and siting guidelines (Draft) for wind power
- Developed general Siting guidelines for IPPs wishing to engage in the business of Power Generation (RE) inclusive
- Produced Guidelines and codes for the procurement of bulk power for the wholesale market.
- Bottlenecks in the off-take arrangement is being removed by the creation of Bulk purchaser

Some RE projects in Nigeria

Wind Power

- The FGN is proposing 10MW wind farm in Kastina State - 37x275KW.
 - Contract signed with a German firm with the Ministry of Power.
- Two pilot wind power projects in the Kebbi State

Solar PV

- 58 Solar based rural electrification across the country by Energy Commission of Nigeria covering:
 - Street lighting
 - Solar powered boreholes
 - Electrification of Households/centre up 2.85KWp
 - More projects have will be executed this year
- Several kilometers of Street lightings initiated by the state and local government councils

Some RE projects in Nigeria cont'd

- **UNIDO SHP Initiatives**

S/N	River/Place	State	Capacity	
1.	Tiga	Kano	6 MW	Rehabilitation
2.	Waya	Bauchi	150KW	
3.	Ezi-imo	Enugu	15KW	

- **Others SHP's**

S/N	River/Place	State	Capacity	
1.	Gurara	Kaduna	30 MW	
2.	Ebvororo	Edo	3KW	
3.				

Some RE projects in Nigeria Cont'd

Existing Small Hydro Sites

S/No	River	State	Installed Capacity [mw]
1.	Bagel (I) (II)	Plateau	1.0 2.0
2.	Kurra	Plateau	8.0
3.	Lere (I) (II)	Plateau	4.0 4.0
4.	*Bakalori	Sokoto	3.0
5.	*Tiga	Kano	6.0
6.	*Oyan	Ogun	9.0
7.	Ikere	Oyo	6.0

* Needs rehabilitation

NERC's roles in engaging the various stakeholders in RE

- ensuring long term political will & ensuring clear govt policy directives towards renewable energy & climate change mitigation strategies
- ensuring clarity of market rules and offer incentives & support to would be investors in Renewables & other efficient energy programmes.
- expand our regulatory facility to encourage & monitor the level and appropriateness of capital investment in the renewable department
- Public Enlightenment on the Climate Change phenomenon & why a low carbon economy must be pursued. We are currently engaged in this crucial step through the NERC CEO Town Hall Forums etc.



Electricity on Demand

HOW NERC CAN FACILITATE RENEWABLE ENERGY MARKET IN NIGERIA

- Through Licensing and regulating persons engaged in the generation, transmission, system operation, distribution, and trading of electricity
- Approve relevant amendments to the market rules
- Monitor the operation of the electricity market
- Set up and administer the fund to be used to subsidise efforts of power consumers who actively participate in the low carbon scheme
- We are providing Support for RE plans in the Rural Electrification (RE) Strategy and Plan,
- we issue the licenses for RE, regulate the rural systems, determine the contribution rates to be sent to the Rural Electrification Fund
- Our recently established regional offices will enhance the regulators satellite presence & to offer support to initiatives in the area of renewable energy



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Investors are welcome to help

- **Given that:**
- - Nigeria is the most populous black nation at around 160m persons, with its conservative energy demand standing at around 80.000MW, current production is still under 40% of the demand, therefore, energy sourcing would definitely expand as we are currently working on at NERC, however the expansion of energy sourcing has to also reckon with the climate.
- Opportunity thus exists for new investors to participate in activities in the Nigerian energy sector, particularly in RE.
- Existing investors in hydrocarbons are also encouraged to invest /diversify into RE as is the case in advanced countries.
- Our new power producers can assist by adopting best international practices & environmental consciousness.





THANK YOU

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